

Environmental Progress through Collaboration





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Acknowledgments

Clean Air Partnership (CAP) would like to thank the members of the Clean Air Council for their financial support, as well as their input, time and thoughtful reflections on this material. CAP would also like to acknowledge the ongoing financial and in-kind support provided by the City of Toronto.



Clean Air Partnership



CLEAN AIR COUNCIL

About the Clean Air Partnership

Clean Air Partnership (CAP) is a registered charity that works in partnership to promote and coordinate actions to improve local air quality and reduce greenhouse gases for healthy communities. Our applied research on municipal policies strives to broaden and improve access to public policy debate on air pollution and climate change issues. Our social marketing programs focus on energy conservation activities that motivate individuals, government, schools, utilities, businesses and communities to take action.

Clean Air Partnership's mission is to transform cities into more sustainable, resilient, and vibrant communities where resources are used efficiently, the air is clean to breathe and greenhouse gas emissions are minimized.

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OVERVIEW

The Clean Air Council is a network of 26 municipalities and health units from across Ontario. Since 2000, Clean Air Council members have been working collaboratively on the development and implementation of clean air, sustainability and resilience actions. The Clean Air Council is based on the premise that municipalities benefit from actions that reduce energy use, reduce emissions, make the movement of people and goods more efficient, and make communities more livable, competitive and resilient.

When assessing a new sustainability initiative, decision makers rightly ask, ‘who else is doing this, how much does it cost, and what does it achieve?’ Participation in the Clean Air Council enables staff to answer these questions through a collaborative expert network. The cost of each jurisdiction allocating resources to research initiatives in isolation is prohibitive and wasteful, and does not further our collective goals of increased implementation of sustainability actions and prudent use of human and financial resources. Through participation in a collaborative, dynamic network, staff can save time and money throughout the design, process, planning, and implementation stages.

Clean Air Council members work collaboratively on agreed upon priorities. Members track, analyze and determine the outcomes of actions and bring together experts and practitioners to share experiences and lessons learned. There are many benefits to a collaborative approach to addressing complex issues. Having multiple jurisdictions at the same table enhances networking and the exchange of resources and information. It ensures that clean air and climate change efforts are not unnecessarily duplicated. Working together, Clean Air Council members achieve far more with fewer resources and reduced risk.

The Clean Air Council identifies common priority areas for collaborative actions through Declarations that serve as workplans for the Council. The Declaration is aligned with Ontario’s four-year municipal election cycle. At the start of each council term, member municipalities identify their priority environmental actions. The most commonly identified actions become Clean Air Council Declaration commitments until the next council term. For each Declaration item, targets are set, and results are presented annually to show progress towards achieving Declaration goals.

Clean Air Partnership is a charitable environmental organization and serves as the secretariat for the Clean Air Council. Clean Air Partnership’s goal is to help municipalities become more sustainable, resilient and vibrant communities where resources are used efficiently, the air is clean to breathe and greenhouse gas emissions are minimized.



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THE HISTORY OF THE CLEAN AIR COUNCIL

For decades, it had been known that air pollution has considerable negative health effects and associated costs. While many of the health effects had been studied, the costs had not. In the year 2000, the first studies estimating the burden of illness due to air pollution were released, first by Toronto Public Health, then the Ontario Medical Association. These studies finally provided decision makers with some of the externality costs associated with air pollution, allowing for more complete and informed decision making.

The evidence base provided through these studies spurred the City of Toronto and Clean Air Partnership to convene the first annual Smog Summit in the year 2000. The Summit provided a forum for municipalities to engage around health and air quality, working together with the understanding that due to the inter-jurisdictional transport nature of pollution, any efforts to clean the air must be collaborative and regional. In light of this, the Clean Air Council was created.

One of the first collaborative actions undertaken by Clean Air Council members was the development of Smog Alert Response Plans that identify municipal actions undertaken during smog advisories. The Clean Air Council identified and documented what actions were being undertaken and the jurisdictions undertaking them. Sharing who was doing what resulted in the incorporation of an increased number of actions into all Council members' Smog Alert Response Plans and led Council members to identify how they could incorporate other environmental and health protective actions on a more consistent basis.

This is the premise under which the Clean Air Council operates. Since the first collaborative actions around Smog Alert Response Plans, Clean Air Council members have worked together across a wide range of areas including climate change mitigation and adaptation, air quality, transportation, urban forestry, corporate and community energy, green procurement, corporate & community green development, community engagement, biodiversity, public health, community planning, and food sustainability. The Clean Air Council responds to members needs through provision of services across three key areas;

Convening networks - the Clean Air Council brings together experts to present to Members on their experience in the area in question

Distilling knowledge - through the creation of primers and FAQ documents, the Clean Air Council distills emerging knowledge so it be used by decision-makers

Groundbreaking research - Clean Air Council staff conduct evidence-based research with results presented in formats that are immediately usable

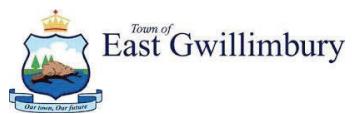
About this Case Study Series

To celebrate 15 years of achievement at the Clean Air Council, this series presents examples of how the Clean Air Council has worked with member municipalities to deliver action. While Clean Air Council members produce impressive results across a number of environmental areas, for the purposes of this series, one case study has been selected per Clean Air Council member. The case studies reflect the range of environmental areas in which the Clean Air Council is active. For some of the case studies, the Clean Air Council had direct involvement in the development of the action of concern, for others, the Clean Air Council was instrumental in disseminating the action to increase its uptake in other municipalities.

CAC MEMBERS



Clarington



KING



Richmond Hill



WHITBY
ONTARIO • CANADA



THE CASE STUDIES

PEEL CLIMATE CHANGE STRATEGY

In the four years since first being formed, the Partnership has jointly completed five corporate and one community greenhouse gas emission and criteria air contaminant inventories.

The Peel Climate Change Strategy was adopted by Regional Council in 2011 through a multi-year collaboration between the Region of Peel, the Cities of Brampton and Mississauga, the Town of Caledon, Credit Valley Conservation and the Toronto and Region Conservation Authority.

This Partnership was one of the first in Canada to address climate change in a comprehensive and integrated way at the regional scale. A nimble, living document, the Strategy supports integrated long-term action by all Partners to mitigate and adapt to climate change.

The Partnership is interdisciplinary with a governance structure made up of adaptation and mitigation workgroups and a steering committee who oversees implementation of the Strategy.

In the four years since first being formed, the Partnership has jointly completed five corporate and one community greenhouse gas emission and criteria air contaminant inventories. Currently, the Partnership is in the process of summarizing the results of six climate change vulnerability assessments across sectors for decision making, while continuing to implement actions to reduce emissions and respond to observed climate change-related impacts.

This harmonized, but flexible approach demonstrates the value of local municipal collaboration in addressing complex issues like climate change. The partnership approach used in Peel's Climate Change Strategy demonstrates a core mandate of the Clean Air Council - that more can be achieved through collaboration. By demonstrating and promoting individual council member actions to the broader group, the Clean Air Council advances and encourages action by other municipalities, while facilitating these municipalities in using their staff resources as efficiently as possible.

"The Region of Peel has been a member of the GTA Clean Air Council since 2001 and our involvement with the Council has been critical in moving our jurisdiction forward on actions to improve air quality. The group facilitates information sharing between all tiers of government and provides opportunities to adopt initiatives which have proven successful in other municipalities. The Council provides Peel with significant cost savings due to the coordination of clean air initiatives across the GTA."

— Louise Aubin, Manager, Environmental Health, Peel Public Health

TOWN OF AJAX PEDESTRIAN AND BICYCLE MASTER PLAN

In December 2007, Ajax Town Council approved its Transportation Master Plan, a long-term strategic document addressing future population and employment growth within the Municipality and the Region in a manner that is sustainable with respect to the environment, the economy and the community. The Plan proposed a multi-modal vision for the Town; in which future travel demand is managed through a combination of new infrastructure, interconnected transit and a network of bicycle and pedestrian facilities. Ajax's council noted that by providing residents with more travel options and, in particular, promoting cycling and walking as a viable alternative to driving, the Town's competitiveness would be enhanced, enabling greater economic development retention and creation.

As a result of the seeds sown through the Transportation Master Plan, the Pedestrian and Bicycle Master Plan was approved in 2010. Phase 1 of the Pedestrian and Bicycle Master Plan surveyed residents and stakeholders to help create a vision and a framework for Phase 2. Through Phase 2, further research was gathered through public workshops, reviews of best practices, consultation with Town staff, and an analysis of current conditions. This phase of the plan resulted in the design of a cycling and pedestrian network, design specifications, behavioural shift strategies, a signage strategy, as well as policy and program recommendations. Phase 3 involved detailing estimated costs for the various network components as well as recommendations related to implementation phasing. This process was guided through a multi-departmental effort that included Planning and Development Services, Operations and Environmental Services, and Recreation and Culture, and Finance, as well as elected officials.

By sharing their efforts and progress on this project, Ajax has contributed to the collective knowledge and experience of Clean Air Council members on the development and implementation of Active Transportation Plans and enabled Clean Air Council members to build on each other's active transportation actions, experiences and results.

"The Clean Air Council has proven to be an invaluable forum which enables us to keep us up-to-date on new and innovative ways to address climate change and air quality at both the corporate and community level. Through liaising with other southern Ontario municipalities we are able to share best practices and take back methods that can be applied in ways that best suit and have the greatest impact in our community. Ajax staff's participation in the Clean Air Council has guided us to continue making improvements, as well as provide us networking opportunities that have aided us in initiating new collaborative partnerships. The Clean Air Council is an invaluable resource for aiding Ajax on its journey to becoming a sustainable community."

— Jade Schofield, Environmental Sustainability Coordinator, Town of Ajax

Image Credit: Town of Ajax



The Plan proposed a multi-modal vision for the Town; in which future travel demand is managed through a combination of new infrastructure, interconnected transit and a network of bicycle and pedestrian facilities.

REGION OF PEEL'S HEALTHY DEVELOPMENT INDEX AND HEALTH BACKGROUND STUDY FRAMEWORK

In 2005, the Region of Peel released its State of the Region's Health report. The report focussed on unhealthy weights and related health consequences in adults such as diabetes, heart disease and reduced quality of life. The report also highlighted the impact of the built environment on health. The findings of this report were presented to council and council provided direction that Health Services comment on development applications and develop planning policy from a public health perspective.

In an effort to address this mandate, Peel Public Health partnered with St. Michael's Hospital and McMaster University to develop the Healthy Development Index (HDI). The HDI is a set of evidence based, quantifiable standards with which to evaluate the walkability of the built environment from a public health perspective. It is comprised of seven aspects of the built environment that have the most impact on walkability.

The Health Background Study Framework (HBSF) was subsequently developed in response to feedback requesting a more user-friendly health assessment tool. The HBSF builds on the original research to provide a more succinct framework for reviewing development applications and planning policy. Most of the criteria are similar to the criteria presented in the HDI, but with some adjustments and additions.

Based on the lessons learned from Region of Peel's HDI and HBSF, Clean Air Council members worked together to foster ongoing collaborations between public health and planning departments to identify opportunities to build healthier and liveable communities. As such, HDI/HBSF metrics and criteria have now been integrated into municipal Sustainable Development Guidelines for a number of Clean Air Council member municipalities.

Clean Air Council members worked together to foster ongoing collaborations between public health and planning departments to identify opportunities to build healthier and liveable communities.

REGIONALIZING GREEN STANDARDS FOR NEW DEVELOPMENT

Image Credit: Guizzetti Developments Inc



The partnership established a funding and collaboration model that enabled the municipalities to leverage resources across political boundaries toward a common purpose, including receiving partial funding through the Federation of Canadian Municipalities' Green Municipal Fund.

In 2012, the Cities of Brampton and Vaughan and the Town of Richmond Hill joined together to produce an innovative set of Sustainability Tools to be used as part of the planning process. By integrating Sustainability Tools into the planning process, the municipal partners are taking the road less travelled and daring to dream that a “menu” of small actions, when repeated over and over, will make a more measurable improvement to the function of the built environment than the traditional “big infrastructure” approach. The partnership established a funding and collaboration model that enabled the municipalities to leverage resources across political boundaries toward a common purpose, including receiving partial funding through the Federation of Canadian Municipalities’ Green Municipal Fund.

Refining the planning process to focus on smaller actions upfront using a clear set of Sustainability Tools has the potential to transform and advance both municipal staff and the development industry’s thinking of what a more sustainable community looks like in Brampton, Richmond Hill and Vaughan. Since integrating these Sustainability Tools into the planning process, the municipal partners have shared lessons learned at a number of Clean Air Council workshops and conferences. Through these presentations, another new direction has emerged – the idea of “regionalizing” the use of these Sustainability Tools as part of the planning process across the GTHA.

The collaboration was initiated through the work of the Clean Air Council and received the 2014 OPPI Excellence in Planning Award in the Research/New Directions category. The transfer of the sustainability metrics to other jurisdictions has been tested and promoted with other Clean Air Council members.

BURLINGTON'S CORPORATE ENERGY MANAGEMENT PLAN

As a municipality committed to improving local air quality and reducing greenhouse gas emissions, and spurred in part by their membership in Clean Air Partnership and ICLEI Canada/Federation of Canadian Municipalities' Partners for Climate Protection Program, the City of Burlington completed their Corporate Energy Management Plan in 2013. Burlington's Mayor and Council championed the Plan and appreciated the financial savings, as well as the environmental co-benefits that would result from the energy conservation and energy efficiency actions. Led by the city's energy coordinator, the Plan was developed through close collaboration with staff from many departments and all levels of management.

The primary goals of the Corporate Energy Management Plan reflect the three pillars of sustainability; to manage energy costs; support a well managed, vibrant, and prosperous community; and reduce greenhouse gas emissions. Attaining these goals also guides the City towards compliance with Ontario Regulation 397/11 under the Green Energy Act which requires public agencies to prepare, make available and implement energy conservation and demand management plans. The Corporate Energy Management Plan achieves its goals by structuring resources and methodologies to improve energy efficiency and energy management. It also uses key actions such as a corporate wide building automation system installed across 30 major energy consuming facilities and ongoing energy tracking, troubleshooting and reporting.

Close engagement of staff through internal training workshops, meetings and energy reduction competitions is integral to attaining internal buy-in and maximizing energy savings through the Plan. Additionally, the face-time available through monthly CAC meetings provided peer support and validation for the program, assisting Burlington in developing and reaffirming the objectives within the Plan.

By sharing results from their Corporate Energy Management Plans, Burlington and other CAC members have supported the development of corporate energy conservation plans across Southern Ontario. This also builds support for Ontario Regulation 397/11 which requires public agencies to report their annual energy use and greenhouse gas emissions to the Ministry of Energy.

"The Clean Air Council enables us to network with our municipal counterparts and senior levels of government. It is beneficial to hear of the work that is happening in other jurisdictions, particularly tips for success and lessons learned. The communities of practice, and reports and action scans, such as on energy management and green procurement, are very helpful as we develop our local policies and strategies and avoid having to reinvent the wheel every time."

— Lynn Robichaud, Senior Sustainability Coordinator, City of Burlington

Image Credit: City of Burlington



The primary goals of the Corporate Energy Management Plan reflect the three pillars of sustainability; to manage energy costs; support a well managed, vibrant, and prosperous community; and reduce greenhouse gas emissions.

TORONTO COMMUNITY ENERGY PLANNING

Ontario is a large province. Ontario communities are diverse, including remote communities that do not use gas or have access to the electricity grid. As such, a one size fits all provincial approach to energy planning is problematic. Provincial approaches to energy planning deal with large transmission and distribution infrastructures, large amounts of public funds, with no thermal integration or land use integration. Community level planning is the antithesis to this approach, using small infrastructure, private funds and an integrated energy approach including electricity, natural gas and water, integrated with land use and economic development opportunities. Community level planning has increased local economic benefits, whereby energy investments stay in the community. Furthermore, this style of planning complements and relieves pressure on larger transmission systems; offers greater environmental benefits; and a more robust, resilient energy system with increased energy security and flexibility.

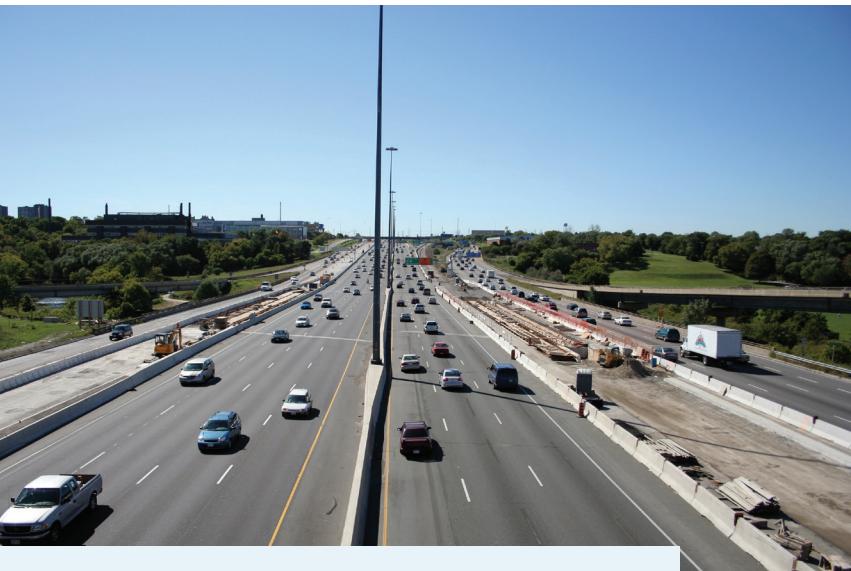
Using population growth estimates and associated long term planning trends as identified through the Places to Grow Act, the City of Toronto realized future pressures on the City's energy distribution system would be considerable. Toronto's Community Energy Study informs the long term land use and energy planning context for growth areas within the City. It identifies energy load profiles and opportunities to address energy growth load at source through embedded energy solutions that are compatible with the urban environment, as well as a process for planning and implementing energy conservation and embedded energy supply solutions. These solutions are both commercially and financially viable, achieving conservation and GHG reduction targets, while minimizing life cycle costs and maximizing grid resiliency and energy security. The plan is not prescriptive, and allows for flexibility between developers and the City throughout the development process.

Through the ongoing sharing of community energy planning efforts and lessons learned Clean Air Council members have accelerated their collective community energy knowledge, capacity and efforts, resulting in greater implementation of Community Energy Plans in the Province.

Using population growth estimates and associated long term planning trends as identified through the Places to Grow Act, the City of Toronto realized future pressures on the City's energy distribution system would be considerable.

HALTON AIR QUALITY MONITORING PROJECT

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In 2007, Halton Region initiated an ambitious air monitoring program to address air quality concerns related to rapid growth and development in the Region.

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The air monitoring program included: 1) airshed modeling across the Region using a methodology piloted by the City of Toronto in collaboration with the Clean Air Council and Golder Associates; 2) the establishment of a stationary air monitoring station in the Town of Milton to supplement the two air monitoring stations run by the Ministry of the Environment and Climate Change in Oakville and Burlington; and 3) the purchase of two highly sophisticated portable air monitoring stations, called airpointer®, that could be used to measure air quality at different locations around the Region. The portable air monitoring stations have been used to measure air quality on the southern and western border of the Region to determine background levels of air pollution coming into the Region; at the waste management site, to determine baseline levels of air pollution for future project proposals; along high volume traffic corridors such as Highway #5 and the QEW to inform land use planning policies related to traffic corridors; and at other locations to calibrate and refine the Region's airshed model.

Projects such as Halton Region's Air Quality Program can be used to 1) support minimum separation distances between high traffic and sensitive land uses, including homes, schools, and hospitals; 2) assess the cumulative impact of corporate projects on local air quality; 3) support Environmental Assessments and Certificates of Approval so they can examine the cumulative impact on local air quality, and; 4) assess broad transportation and land use planning policies or plans for their impact on air quality to support future amendments to the Official Plan and future regional policies.

Air quality has been a traditional cornerstone of the Clean Air Council's work. Today, the Clean Air Council continues to facilitate efforts to advance air quality monitoring and modeling, advancing the collective knowledge and understanding of air quality improvement measures across the region.

DURHAM REGION PARTNERS IN PROJECT GREEN

Partners in Project Green: A Pearson Eco-Business Zone was created in 2006 as a result of over a decade of partnership between the Greater Toronto Airports Authority and Toronto and Region Conservation Authority (TRCA). In 2011, Durham Partners in Project Green (DPPG) was initiated as a result of a similar collaboration between TRCA, the Durham Region Roundtable on Climate Change and Durham Sustain Ability (DSA) - Durham Region's most established and accomplished environmental not-for-profit organization. Where the Pearson PPG model was developed for large businesses around Canada's largest airport, DPPG has been optimized to assist small and medium sized enterprises in the Region of Durham.

DPPG works with and acts as an interface between the Region of Durham and Durham's businesses, with the goal of improving productivity, while also reducing greenhouse gas and air pollution emissions. This is achieved by bringing awareness of green programming and incentives available to Durham businesses, and by supporting the sharing of experiences and results from green efforts between businesses. By serving as a single point of contact, DPPG facilitates uptake of environmental initiatives from many sources, thereby increasing the potential for business to become more environmentally aware and active. DPPG directly provides programs around eco-efficiency, education and networking, and provides a web portal through which businesses can find examples of what can be done in their sector, connect to financial incentives and programs, and link to service and product providers who can assist with implementation. Through DPPG, Durham business can foster more sustainable procurement practices, develop partnerships with other businesses and test new innovations and technologies with businesses in the Region.

The Clean Air Council continues to foster awareness of how municipalities can achieve synergies between economic development and environmental goals. By fostering relationships between government and business, energy conservation and sustainability efforts are advanced for all.

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OAKVILLE'S SUSTAINABLE PURCHASING PROCEDURE

The Region of Peel has been a member of the GTA Clean Air Council since 2001 and our involvement with the Council has been critical in moving our jurisdiction forward on actions to improve air quality.

As an early adopter in green procurement policies, the Town of Oakville's Sustainable Purchasing Procedure (SPP) was one of the first of its kind and was adopted by Council in 2009. Fed by the Town's Environmental Strategic Plan, the SPP was developed through the coordination efforts of numerous departments who met monthly from 2006 -2008. The Procedure achieves its environmental goals through waste diversion, air quality and greenhouse gas improvements, and reduced natural resource, energy and water consumption. The SPP results in the purchasing of environmentally preferable goods and services that have a lesser or reduced effect on human health and the environment when compared with other goods and services that serve a similar purpose. In rolling out the Procedure, staff outreach and education was key and workshops were held with all departments and facilities. While a top-down approach would perhaps have been faster to implement, a bottom-up approach was more effective in creating long-term compliance and change. Staff use an internal website that is populated with information and opportunities to implement sustainable purchasing across the corporation.

The CAC manages several Communities of Practice focusing on specific emerging environmental areas. The Green Procurement Community of Practice assists CAC members to identify and act on opportunities to advance green procurement policies and actions.

"Oakville has been able to advance initiatives working collaboratively with Council members across the GTA. Considerable achievements come through the exchange of ideas, application of innovative Clean Air Council research, and participation in 'Communities of Practice' to build municipal leadership for improved air quality, greenhouse gas emission reductions and enhanced awareness of our regional air quality and climate change issues. Oakville looks forward to our continuing strong and positive relationship to achieve significant accomplishments for our citizen's health and environment."

— Cindy Toth, Director, Environmental Policy, Town of Oakville

CITY OF MISSISSAUGA'S NATURAL HERITAGE AND URBAN FOREST STRATEGY

The City of Mississauga's Natural Heritage and Urban Forest Strategy (NH&UFS) is an award-winning plan that will guide the management and protection of Mississauga's natural areas and urban forest in the next 20 years. The plan was developed between 2011 and 2013, and approved by Council in 2014. Combining both natural heritage and urban forestry in the same strategic document was a unique approach that recognizes the ecosystem services they jointly provide and ensures consistency in the goals and objectives for their management.

The Strategy includes an Urban Forest Management Plan (UFMP) that is one of its key implementation tools. The preparation of both documents was guided by a steering committee and a core working team that included representatives from the City of Mississauga, Region of Peel, Credit Valley Conservation, Toronto and Region Conservation Authority and Conservation Halton.

The NH&UFS was built on the ideas and input of a wealth of individuals and groups, including: Aboriginal organizations, business and development organizations, City Council committees, community groups, environmental groups, government agencies, local arboriculture firms, local utility and transit companies, local Conservation Authorities, neighbouring municipalities, recreational groups, Region of Peel, residents and resident associations.

Nine strategic objectives are described in the Strategy, outlining varied approaches for the treatment of public and private lands, as well as general objectives which cover the system in its entirety. The NH&UFS seeks to implement 26 strategies organized under four themes: planning, protection and management, engagement and partnerships and tracking. The Strategy also contains key recommendations around ecosystem valuation as a community asset, and includes concrete recommendations that commit the City to maintain and improve Mississauga's Natural Heritage System.

The Clean Air Council continually supports the advancement of efforts to build awareness of the ecological, social and community values provided by our urban forests and natural heritage systems, to not only address greenhouse gas and air pollution emissions but to also create more livable, healthier and resilient communities.

"The Clean Air Council enables municipal staff working on clean air and environmental issues in the GTA to share best management practices, gain insight into what's happening in other jurisdictions, and develop tangible methods for municipalities to achieve the goals in the Clean Air Council Declaration."

— Brenda Osborne, Director, Environment Division, City of Mississauga

Image Credit: marques / shutterstock.com



The NH&UFS seeks to implement 26 strategies organized under four themes: planning, protection and management, engagement and partnerships and tracking.

OSHAWA'S COMMUNITY GARDENING PROGRAM

Image Credit: City of Oshawa



In November 2012, the Oshawa Environmental Advisory Committee hosted a day-long symposium, "Community Gardens: Growing the Future", that helped make this connection and successfully generated a growing interest in local food and food production.

For several years, the City of Oshawa has been engaging its community on climate change mitigation and adaptation opportunities. As is the experience of most municipalities, community members found these ideas difficult to grasp at the local level. Oshawa has discovered that facilitating discussions about local food and community gardening can be an effective engagement tool to connect to larger issues like climate change and adaptation strategies.

While there was an existing community gardening policy in the City, it was noted that a key barrier to community gardening was the fact that community gardeners had to provide their own liability insurance. The City stepped in and established a Community Gardening Policy that provides insurance to community gardening groups, binding these groups to the municipality's corporate liability insurance.

Despite this, local residents were not generally aware of the existence of the City's many community gardens or the role that they could play in building resilient local food systems. In November 2012, the Oshawa Environmental Advisory Committee hosted a day-long symposium, "Community Gardens: Growing the Future", that helped make this connection and successfully generated a growing interest in local food and food production.

In response, in 2013 a series of workshops was developed to further the potential of community gardens in the City and to engage the community in a dialogue connecting community gardening to larger social issues including climate change, poverty and waste reduction. Six "sold-out" free workshops were held on numerous gardening topics including backyard vegetable growing, small space gardening, worm composting, canning and preserving, safe food handling and seed preservation.

As a result of the success of these workshops, in 2014 the program evolved to become part of the City's regular Recreation and Culture Services Branch programming, and has been expanded to cover other issues of local sustainability including home energy conservation and eco-driving. In addition, a virtual network of over 200 local gardeners and foodies connect regularly to share ideas and promote the value of local, sustainable food production.

The Clean Air Council has supported the advancement of Community Gardening Policies across the region by identifying and sharing actions and strategies that minimize barriers and actively promote and support increased urban food production.

PICKERING'S SUSTAINABLE NEIGHBOURHOODS

Pickering's Celebrating Sustainable Neighbourhoods program connects neighbourhood groups to activities that improve the environmental, economic and social well-being of the City. In 2012, the City released its Measuring Sustainability Report, containing information on 55 sustainability indicators across the following five categories: Environment, Society, Economy, Consumption, and Development. The Celebrating Sustainable Neighbourhoods program builds on this report and provides a mechanism through which community members can contribute positively to these five categories.

Through this program, 'Neighbourhood Groups' are created, consisting of five or more people who live and/or work in Pickering. Groups can be made up of immediate neighbours, places of worship, schools, businesses, or organizations. Next, the group picks one or more activities they'd like to do, and that relate on some level back to an indicator. It can be as simple or complex as they wish. Examples of activities include: community cleanups, food drives, charity yard sales, planting community vegetable gardens, group fitness, volunteerism, and many others. Each year after the program wraps up, participants attend a Celebration Event to share their activities and successes, after which, a peer vote for Best Group Effort takes place. The winning group then works with the City to implement a community enhancement project valued at up to \$10,000.

Pickering's Celebrating Sustainable Neighbourhoods program is one of the many efforts being undertaken by Clean Air Council members to support community engagement to advance environmental goals and actions. Clean Air Council members support each other's community engagement efforts and share actions undertaken and lessons learned in developing relationships and building capacity in community partners.

Image Credit: City of Pickering



Each year after the program wraps up, participants attend a Celebration Event to share their activities and successes, after which, a peer vote for Best Group Effort takes place.

OAKVILLE'S AIR POLLUTION BY-LAW

Building on community momentum that amassed in response to opposition to the creation of a local gas-fired power plant, Oakville's Health Protection Air Quality By-law was created to deal with community concerns over health effects due to fine particulate matter (PM2.5). Fine particulate matter refers to airborne particles of pollution, including aerosols, smoke, fumes, dust, ash and pollen less than 2.5 micrometres in size. Fine particulate matter alone results in 85 preventable deaths a year in the Town.

When the bylaw was developed in 2010, there were no federal or provincial regulatory standards for PM2.5, so Oakville enacted its own regulatory bylaw through Municipal Act powers. The bylaw allows Oakville to assess and control major emissions of fine particulate, to protect residents' health, collect emissions information and reduce pollution levels. Under the By-law, both new and existing facilities with major health-risk air pollutant emissions must complete a Health Protection Air Quality Application. Applications are posted for public comment before being reviewed by the Community Services Committee, and then considered by Town Council.

Emissions and controls from all major emitters are reported on the town's website annually. Fines for those who operate facilities without approval, fail to complete approval applications, or provide false information, are up to \$100,000 for a first offence, and \$10,000 for each day that the offence continues. To support local business affected by the bylaw, the Town provides guidance and also assists with emission reduction strategies. The Town's Air Pollution By-law fills a gap by ensuring that air pollution point sources not covered by provincial and federal regulations and inventories are identified and disclosed and efforts to reduce air pollution emissions are identified and acted upon.

Actions such as Oakville's Air Pollution By-law supports the ability of all Clean Air Council members to advance of knowledge and capacity to act on air pollution through the sharing of; new research on the public health and economic impacts of air pollution; efforts being undertaken locally, nationally and internationally to monitor and track air pollution, and; opportunities and effectiveness of interventions that reduce pollution and protect health.

Image Credit: Photo smile / shutterstock.com



The bylaw allows Oakville to assess and control major emissions of fine particulate, to protect residents' health, collect emissions information and reduce pollution levels.

TORONTO PUBLIC HEALTH'S CHEMTRAC

Image Credit: Kiev.Victor / shutterstock.com



The ChemTRAC program was adopted because evidence showed that reporting could stimulate pollution prevention that would reduce releases and exposures to priority substances.

ChemTRAC is a Toronto Public Health-designed program to increase public awareness of priority chemicals and reduce pollution from industrial and commercial sources. Using data collected under Toronto's Environmental Reporting and Disclosure Bylaw, ChemTRAC supplements information from national and provincial programs that require reporting from larger emitters only. Given its lower reporting thresholds, ChemTRAC collects information about smaller users and lower releases of 25 priority substances in Toronto. These 25 substances were identified because available evidence indicated that they might be in Toronto's environment at levels of concern to health.

There are three main streams associated with the program: reporting, informing the public, and pollution prevention. The Environmental Reporting and Disclosure Bylaw requires facilities located in Toronto to track the use and release of the 25 priority substances listed within the bylaw and to report information if they meet or exceed the reporting thresholds. The Bylaw outlines the reporting duties record keeping requirements of each facility and also lists certain exemptions. The Bylaw also provides for penalties of up to \$100,000.

Public information is delivered through the ChemTRAC portal which provides the names of facilities that have provided information to Toronto Public Health and indicates if they have reported chemical data, are below thresholds, or are exempt. This information is available in a tabular format and also as a map that can be searched by address entry, or selecting the ward or neighbourhood of choice. Users can also search by facility, by substance or by industry type.

The ChemTRAC program was adopted because evidence showed that reporting could stimulate pollution prevention that would reduce releases and exposures to priority substances. Toronto Public Health fosters pollution prevention through highlighting green business practice strategies, including industrial sector guides and case studies, toxic reduction grants, and working in partnership with other City divisions, industry associations, and the federal and provincial governments.

Through the Clean Air Council, Toronto Public Health shares updates and lessons learned on ChemTRAC's progress and results, thereby advancing the efforts across the Clean Air Council network to understand the impacts of pollution and act on opportunities to reduce public exposure to pollutants.

HALTON HILLS SUSTAINABILITY IMPLICATIONS WORKSHEET

The Town of Halton Hills started its successful sustainability journey in 2007 with the launch of the Green Plan, developed by the Mayor's Green Plan Task Force. As one of the first of its kind in Ontario, the Green Plan set out 70 actions to be taken towards a healthier natural environment. It recognized the need to 'think globally, while acting locally'. Action has already been taken on over 90% of the Green Plan's recommendations.

To facilitate Green Plan implementation, shape decision-making and consolidate comments on the environmental impacts of staff recommendations, in 2008, the Town amended its staff report template to include a new "Environmental Impacts" section. In use for the next three years, the latter section provided Council and the public with valuable information.

In 2011, recognizing the need to also consider the community's economic prosperity, cultural vibrancy and social wellbeing, the 'Environmental Impacts' section was replaced with a much broader 'Sustainability Implications' section. To facilitate its effective implementation and decision-making that aligned with the Town's sustainability priorities, a 'Sustainability Implications Worksheet' was developed. Council and Town staff also received training, information and ongoing assistance. The 'Sustainability Implications' section has provided Council, Town staff and the public with a more fulsome analysis of staff recommendations as they relate to quality of life in Halton Hills.

In 2014, the Town's approach to assessing sustainability implications was updated to (i) align with the newly approved Community Sustainability Strategy; and (ii) streamline decision-making. In addition, a training video was developed.

Use of the Sustainability Implications tool has facilitated and supported the implementation of a broad range of initiatives, including the Community Sustainability Strategy, Mayor's Community Energy Plan, Green Development Standards and countless others.

Halton Hills was a leader in adopting a 'Sustainability Implications' approach to decision making, accompanied by training and support tools. The Town has been recognized by the Canadian Association of Municipal Administrators with the prestigious National Environment Award for innovation and administrative excellence; and by the Credit Valley Conservation with the "Friends of the Credit Conservation Award" – Certificate of Merit.

Inspired by Halton Hills' leadership, other municipalities are exploring the use of similar decision-making tools.

As one of the first of its kind in Ontario, the Green Plan set out 70 actions to be taken towards a healthier natural environment. It recognized the need to 'think globally, while acting locally'.

YORK REGION'S GREENING STRATEGY

Adopted in 2001 and refined in 2012, the Greening Strategy gives direction for progress towards a greener York Region across four key areas; Stewardship and Education; Environmental Land Securement; Enhancement and Rehabilitation, and; Leadership, Innovation and Knowledge.

York Region's Greening Strategy was developed to protect, restore and create green infrastructure which contributes to sustainable health communities. Adopted in 2001 and refined in 2012, the Greening Strategy gives direction for progress towards a greener York Region across four key areas; Stewardship and Education; Environmental Land Securement; Enhancement and Rehabilitation, and; Leadership, Innovation and Knowledge.

Through the Stewardship and Education stream, the Strategy aims to educate residents about the value of green infrastructure. This is achieved by providing opportunities for community members to discover connections with nature through education programming, outreach events and public engagement through marketing campaigns. The Environmental Land Securement stream seeks to protect core natural areas and restore linkages through land donation, easement and acquisition, and features projects that develop natural heritage trail linkages and protect natural features on agricultural land.

The Enhancement and Rehabilitation stream seeks to enhance and rehabilitate natural environments across both public and private lands via private land tree plantings, species at risk programs, public land naturalization and naturalization of Regional properties. The fourth and final stream is Leadership, Innovation and Knowledge which aims to seek and transfer knowledge and demonstrate leadership and innovation in the protection and promotion of the natural environment. Some of the programs and projects developed to achieve this goal include sharing and dissemination of technical knowledge and the provision of funding opportunities.

Protecting and enhancing our green infrastructure to provide fertile soil, clean water and air, protect us from floods, and provide a necessary habitat for humans and other animals is a key goal of York Region's Greening Strategy. Advancing and disseminating knowledge, actions and lessons learned from efforts to increase the recognition of the value green infrastructure provides to our communities is an ongoing priority for the Clean Air Council.

MARKHAM'S LOCAL FOOD PROCUREMENT PROGRAM

Over the past decade, local food has been growing in prominence across Ontario. This growth is due to a number of cross-cutting areas, including resilience, sustaining local economies and promoting economic growth. In June 2008, Markham became the first municipality in Canada to adopt a Local Food Plus (LFP) procurement strategies for its municipal practices. The LFP certification system addresses production, labour, native habitat preservation, animal welfare, and on-farm energy use, and aims to build a stronger network of small and medium sized local producers by linking them with purchasers of every size. Markham started by piloting LFP through a cafeteria and catering food service contract in the Markham Civic Centre and a neighbouring high school.

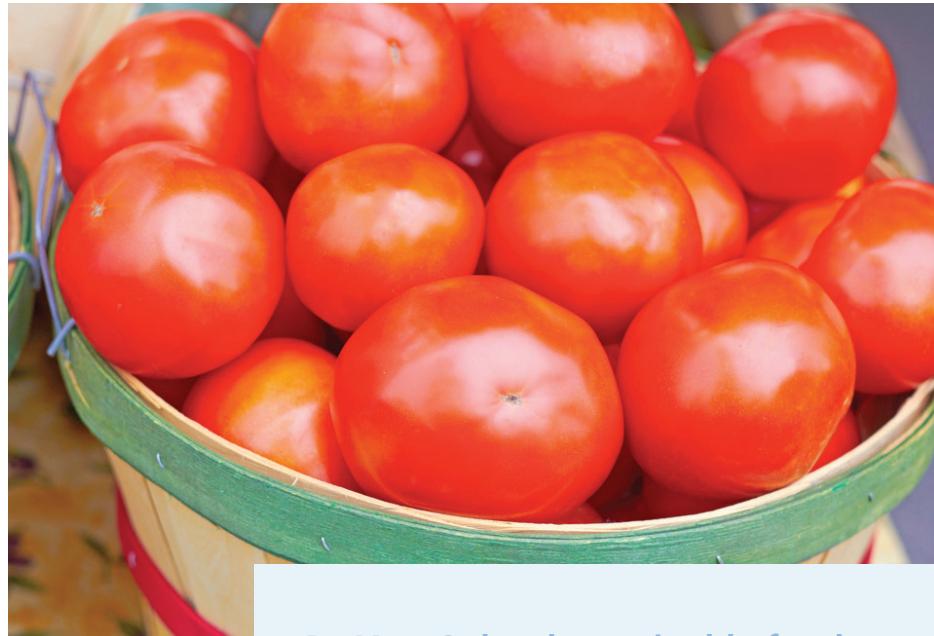
The 2008 Procurement Policy put in place requires 10% of the City of Markham's food to be purchased from LFP-certified farmers, increasing at 5% annually to 2013. This Policy was facilitated by strong political champions and was promoted heavily by City staff using outreach to develop staff and community buy-in. By Year 3, local sustainable food represented 25% of the City's total food purchase budget. The City's food Procurement Policy also aligns with other strategic City documents including the Greenprint Community Sustainability Plan.

Markham's success in local food procurement has been replicated and enhanced through the City of Toronto and Halton Region's local food procurement policies. The Clean Air Council continues to identify and facilitate the advancement of local food procurement opportunities across the Clean Air Council network.

"Participating in the Council has been a valuable source of current information education and resources about environmental and sustainable issues across the GTA and beyond. We have benefited from research, shared project experiences and developed useful partnerships as a result of our membership in areas such as anti idling, bottled water use, green development standards, pesticides, energy conservation and others."

— Mavis Urquhart, Manager, Environmental Leadership, City of Markham

Image Credit: Matthew Ennis / shutterstock.com



By Year 3, local sustainable food represented 25% of the City's total food purchase budget. The City's food Procurement Policy also aligns with other strategic City documents including the Greenprint Community Sustainability Plan.

AURORA'S VALUE OF NATURAL ASSETS INITIATIVE

What we measure reflects what we value and what captures our attention. Whereas Gross Domestic Product (GDP) assumes the only point at which an asset has value is when it is bought or sold in the formal economy, natural capital values any stock or flow of energy and material that produces goods and/or provides services. Natural capital's services includes: resources (renewable and non-renewable materials), sinks (that absorb, neutralize or recycle wastes) and services/processes -such as watershed management or climate regulation. Traditional economics only attaches value to land when it is developed and turned over to commercial, industrial or residential uses. Natural capital valuations apply a more holistic, longer-term approach, that can better integrate sustainability considerations into cost-benefit analyses.

With the goal of supporting environmental stewardship and sustainability, the Town of Aurora mapped the Town's natural capital assets and estimated the value of Aurora's natural capital at approximately \$7.4 million annually (this amount does not include the value of street and urban trees). This value is attributed to protection of environmental features, reduction in greenhouse gas emissions and other ecological benefits.

Aurora's Natural Assets Initiative enables the Town to better incorporate their natural capital assets into their land use planning decisions. The Town is preparing Official Plan policies that will allow natural capital estimates to be included in economic valuation impacts through pre and post development scenarios. Assessing and incorporating natural capital in the municipal context is a new and emerging field. The Clean Air Council ensures that knowledge and opportunities to forward action in this area are advanced and collectively shared across Clean Air Council members.

Image Credit: Pavel Vakhrushev / shutterstock.com



With the goal of supporting environmental stewardship and sustainability, the Town of Aurora mapped the Town's natural capital assets and estimated the value of Aurora's natural capital at approximately \$7.4 million annually.

LONDON'S ENERGY PLAN: KEY DRIVERS FOR LONDON'S COMMUNITY ENERGY ACTION PLAN

If the goals of the CEAP are met, London would achieve a 13% improvement in energy use per person by 2018 compared to 2010, with a 15% reduction in greenhouse gas emissions from 1990 levels by 2018, and an annual energy cost avoidance of \$250m/year by 2018 when compared to 2010 energy use levels.

London's Community Energy Action Plan (CEAP) was developed in consultation with multiple-stakeholders in 2013 and aligned with the 2014-2018 council term. London's CEAP is a Community-driven plan for the City, as opposed to a City-driven plan for the Community. In developing the CEAP, staff at the City of London translated their energy inventory into an energy dollar inventory and determined that about \$1.3 billion dollars is spent each year in London on energy. Staff then examined how much of this money leaves the City and found that almost 90% of those dollars leave the London community. Better understanding of the amount of money spent on energy and where those dollars go enabled London council and citizens to make the connection between saving energy, developing community energy and local economic development.

The goals of the CEAP are two-fold, 1) to increase local economic benefits from sustainable energy use, and 2) to reduce greenhouse gas emissions. Economic benefits are increased through cost savings from energy conservation and energy efficiency. Revenues are anticipated from energy efficiency efforts and local production of clean and green energy products. Additional economic benefits are realized through the job creation associated with product and service providers engaged in these activities.

The CEAP sets London on a path where the City will meet provincial and exceed federal greenhouse gas emission reduction targets, with a 15% reduction in greenhouse gas emissions from 1990 levels by 2020 and an 80% reduction by 2050. To achieve these overall goals, sector-specific goals are set across a number of building types, transportation systems and local generation facilities.

If the goals of the CEAP are met, London would achieve a 13% improvement in energy use per person by 2018 compared to 2010, with a 15% reduction in greenhouse gas emissions from 1990 levels by 2018, and an annual energy cost avoidance of \$250m/year by 2018 when compared to 2010 energy use levels.

London's experience translating energy inventories into energy dollars has been shared with Clean Air Council members and has enabled them to undertake their own energy dollars inventories. This allows for better understanding of the local economic benefits of community energy and facilitates engagement of a more diverse group of stakeholders planning efforts and actions.

HAMILTON'S ENERGY RESERVE

Hamilton's first Corporate Energy Policy (CEP) was adopted in 2007 and was a key step in the City's attainment of environmental targets adopted by Council and provided City staff and external stakeholders with a set of guidelines and protocols to assist in decision making pertaining to corporate energy use. Through the CEP (as well as other measures) the City aims to reduce greenhouse gas emissions 80% by 2050 (using a 2005 baseline) through a combination of energy conservation and demand management, renewable energy supply and the purchase of environmental offsets. These reductions have direct benefits for the City both financially and environmentally.

A specific policy within the CEP is the Energy Reserve which was originally established to permanently fund the Office of Energy Initiatives (OEI) at the City, but now covers many additional activities including mitigating energy cost increases, energy audits and feasibility studies, pilot projects for new energy technologies and renewable energy projects, energy efficiency retrofits, and OEI website, education and awareness programs.

Energy expenditure savings are returned to the OEI and the OEI identifies sources of incentive funding for retrofit and other energy conservation initiatives either for specific projects, or to bolster the OEI reserve so it can maintain acceptable funding levels. The Reserve is also being used to fund energy projects and provide incentive payments to reduce the cost of energy efficiency and conservation projects. As of 2014, energy intensity of corporate buildings was down 16%, and the City had accumulated savings of \$38.7 million.

Sharing Hamilton's experience contributes to advancing the collective corporate energy efforts across Clean Air Council member jurisdictions, thereby furthering Clean Air Council members' corporate energy efficiency actions via the use of innovative financial mechanisms that can secure resources to implement corporate and community green energy and energy efficiency actions.

Image Credit: Horst Petzold / shutterstock.com



Through the CEP (as well as other measures) the City aims to reduce greenhouse gas emissions 80% by 2050 (using a 2005 baseline) through a combination of energy conservation and demand management, renewable energy supply and the purchase of environmental offsets.

LEVERAGING SOCIAL MEDIA TO TALK CLIMATE ACTION IN VAUGHAN

Image Credit: City of Vaughan



A virtual feedback forum was established through which community members were able to comment and prioritize 85 actions that were considered for inclusion in the Plan.

The City of Vaughan's Community Climate Action Plan (CAP) was developed to provide community members with practical ways to reduce greenhouse gas emissions from community sources by 20% below a 2006 baseline by the year 2026. The CAP was developed through a collaborative stakeholder-driven process. Stakeholder engagement did not solely rely on traditional outreach activities such as City Hall consultations, but rather elevated engagement efforts with an online data-sharing platform designed to capture community expertise and innovation. A virtual feedback forum was established through which community members were able to comment and prioritize 85 actions that were considered for inclusion in the Plan.

Additionally, a CAP Tweet Up was convened whereby a time and date was selected for community members to meet on Twitter to engage in live conversation regarding climate change action. This technique was undertaken to provide additional opportunities for youth engagement and presented a novel way to engage a busy audience in an accessible and convenient way. Using innovative platforms like this encouraged a broader range of input from community members.

To achieve its reduction target, the Plan outlines nine actions that have been defined and are underway, as well as nine opportunities that require further refinement before implementation can occur. Actions are detailed in the Plan for 'At Home', 'At Work' and 'On the Move'.

'At Home' and 'At Work' actions include a range of new construction requirements, energy conservation and efficiency measures, retrofit programs, district energy opportunities and waste diversion strategies targeted at residential, commercial, and industrial sectors. Transportation, or 'On the Move', actions relate to land use planning policy, active transportation and transportation demand management, and public transit enhancements.

The City of Vaughan's social media efforts are one of the many innovative public engagement strategies undertaken by Clean Air Council members. Ongoing efforts for testing new ways of engaging the public on climate change and sustainability actions continues to be a high priority for Clean Air Council work and collaboration.

TOWN OF WHITBY'S PORT WHITBY NEIGHBOURHOOD SUSTAINABLE COMMUNITY PLAN

Port Whitby is a community of approximately 2000 people on 183 hectares on the Town of Whitby's waterfront. It is a primary waterfront destination in the Town of Whitby and has a long history of manufacturing, oil storage and commercial shipping. The Port Whitby area has a variety of amenities and opportunities that made it ideal for a Sustainable Community Plan, including existing park spaces, the GO Station and new growth and development.

The Port Whitby Sustainable Community Plan establishes a sustainable vision for the Port Whitby neighbourhood. It serves as a strategic plan that presents a vision for sustainable growth in the neighbourhood. The Plan reflects the Town of Whitby's desire to incorporate elements of complete and healthy community principles, and to provide infrastructure in a suitable, sustainable manner.

The Sustainability Framework within the Plan includes a set of goals organized into six focus areas, which are then translated into indicators that span the economic, social and environmental aspects of sustainability. Focus areas cover land use and economic vitality, resource efficiency, environment, habitat and biodiversity, and accessibility and transportation. 33 strategies were recommended to achieve the focus area goals. Challenges and opportunities associated with the strategies are detailed throughout, with case studies presented to demonstrate how other communities achieved similar goals.

Another major component of the Plan was an Urban Design Concept Plan for the Whitby GO Station site. This concept plan was developed to be consistent with the recommendations of the Port Whitby Sustainable Community Plan. Principle urban design objectives of the concept plan included: a pedestrian focus, energy use reduction, optimal urban form, green infrastructure, higher density, reduction of urban heat island, etc. The final design concept is a reflection of the potential that can be achieved using sustainable design principles.

In order to ensure that the Plan spoke to the community's vision, extensive public engagement was a key component of the Plan's progress. Public meetings, open houses and community cafes engaged the community and ensured they fed their vision for the future of the Port Whitby area. The Plan team then selected from a comprehensive range of implementation options some of which were able to be implemented immediately while others are still in the planning phase. Each action has a detailed implementation framework that has achieved considerable buy in and commitment.

Success on this effort has led to Town of Whitby's commitment to develop a Town-wide community Sustainability Plan. Town of Whitby's efforts to advance the sustainability of their community has been supported by the experiences and lessons learned shared via the Clean Air Council which has enabled them to spend less time in the planning stage and move much more quickly into implementation.

Image Credit: Town of Whitby



The Plan reflects the Town of Whitby's desire to incorporate elements of complete and healthy community principles, and to provide infrastructure in a suitable, sustainable manner.

CLARINGTON'S PRIORITY GREEN CLARINGTON GREEN HOME DEMONSTRATION PROJECT

The homes are efficient in their use of water, energy, and material resources, with reduced operating costs and reduced demand on energy and water infrastructure as compared to a similar home constructed to the Ontario Building Code requirements.

Responding to strong anticipated future development pressures, the Municipality of Clarington launched Priority Green Clarington, a “local planning for global stewardship” initiative. Priority Green Clarington is setting a new standard for residential development in the Municipality, prioritizing innovative, sustainable development that improves quality of life for community members.

One way in which Clarington seeks to promote sustainable development is through its Green Demonstration Project. This Project is a partnership between the Municipality, three residential builders and the Region of Durham, and has led to the construction of six demonstration homes that incorporate green building techniques and technologies. The homes are efficient in their use of water, energy, and material resources, with reduced operating costs and reduced demand on energy and water infrastructure as compared to a similar home constructed to the Ontario Building Code requirements.

The homes have been sold to home owners, who, supporting the initiative, are allowing for performance monitoring of the homes to be undertaken under real-life conditions. Performance monitoring allows for the evaluation of economic, environmental and social benefits to this approach to home building. Through this Project, local developers, decision makers and community members will have an improved knowledge of green home building practices and increased capacity to build green, while the Municipality can demonstrate its commitment to sustainability and innovation. The results and lessons learned from Clarington’s Green Demonstration Project will increase the collective knowledge across Clean Air Council members on the opportunities to monitor and improve the performance of green homes.

Preliminary data based on the first four months of performance monitoring shows:

- Water efficiency improvements of 8 – 17% and energy efficiency improvements of 9 – 12% over models of comparable homes built to the minimum Building Code specifications.
- Average daily water consumption of 119 litres per capita per day, which is well below the current Region-wide average of 230 litres per capita day.
- Average monthly electrical consumption of 468 kilowatt hours per month, as compared to a typical average of 800 kilowatt hours per month for a family of four in Ontario.
- Building on the work of Clean Air Council members, the Municipality is considering the opportunities and challenges of “regionalizing”.

TOWN OF CALEDON GREEN PROCUREMENT STRATEGY

The Town of Caledon revamped its purchasing bylaw in 2013, and staff took the opportunity to embed strong green procurement policies within the overall bylaw. The Town already had an environmentally responsible procurement policy in place since 2005, but it was not used effectively. During the purchasing policy review, the Town amalgamated several green policies that supported green procurement into the overall bylaw.

The Town incorporated a mandatory 5% environmental leadership scoring in all request for proposals (RFP's). For every RFP issued by the Town, an Environmental Leadership Evaluation is completed by the vendor. Vendors are scored across three areas, Company focus (1%), Office Programs (3%), and Products/Services (1%). This was one of the key tangible requirements included in the policy.

An additional requirement was that the Town's Energy and Environment Division sign off on all purchasing requisition forms for purchases above \$50,000. Traditionally, such purchases would be signed off by Finance, Information Technology and Accessibility, for example. The addition of Energy and Environment as a compulsory sign off allows for an environmental lens to be applied to public bids early in the scope of work and specifications stage which has enabled the Energy and Environment Division to have conversations with procurement counterparts and department staff to incorporate "green" features and requirements.

To raise profile of the issue, the Town hosted a Green Vendor Fair in 2014. The Fair connected municipal staff with companies selling environmentally friendly products and services. Exhibitors had the opportunity to showcase their goods and services with staff from the Town and with staff from other municipalities as well as other external stakeholders. The Fair was a great opportunity to let staff and vendors talk in a relaxed way, and was an opportunity for staff to learn about the many green options available from both green and traditional vendors.

Green purchasing was an action within the Town's Environmental Strategic Plan and also aligned with the Town's Corporate Objectives. Joining the Municipal Collaboration for Sustainable Purchasing group, and participating in the Clean Air Council Green Procurement Community of Practice also helped the Town in initiation and implementation.

As a small municipality, the Town has punched above its weight in delivering a green procurement strategy with such strong policies. While having limited resources is a barrier in the development of such a strategy, being small and nimble is also an asset when it comes to going live and generating change within the municipality.

To raise profile of the issue, the Town hosted a Green Vendor Fair in 2014. The Fair connected municipal staff with companies selling environmentally friendly products and services.

"The Clean Air Council helped me get up to speed very quickly and efficiently on the air quality and environmental issues facing municipalities. It also provided a forum for getting to know the municipal staff leaders and learn from best practices and similar challenges for moving ahead. It was wonderful to be able to work as a team and have a support network that helped me move forward with actions a lot easier and faster than going it alone would have allowed me to."

— Sara Peckford, Manager, Energy and Environment, Town of Caledon

IMPROVING THERMAL COMFORT IN WINDSOR'S PARKS AND PLAYGROUNDS

Image Credit: City of Windsor



For visitors to Windsor's 203 parks, heat is already an issue. Parks staff noticed that during July and August, parks can be too hot to use, resulting in less frequent visits, and visits of short durations.

While urban heat is an issue for cities generally, in the Canadian context, this is especially pronounced in the case of Windsor, Canada's southernmost city. The average temperature in Windsor has increased by almost 1°C since 1940 and is predicted to increase by 2.5°C to 3.7°C by 2050 from a 1961-1990 baseline. Additionally, the number of days over 30 °C in Windsor could almost quadruple by 2071-2100. Windsor has a history of work on heat related issues, having completed an Urban Heat Island Study (2012), Heat Alert and Response Plan (2009) and the innovative Stay Cool Windsor Essex Program (2011).

For visitors to Windsor's 203 parks, heat is already an issue. Parks staff noticed that during July and August, parks can be too hot to use, resulting in less frequent visits, and visits of short durations. This is due to a combination of inadequate shade, combined with park surfaces that retain heat, including metal slides, asphalt and rubber safety mats for example.

Acting on this issue, the City commissioned the 2013 Report 'Improving Thermal Comfort in Windsor, ON; Assessing Urban Parks and Playgrounds'. The Report reviewed literature regarding urban heat islands and thermal comfort, and assessed six parks across the City. For each park, landscape and design features, and local surroundings were observed, thermal comfort and shade audits were carried out, and interviews were conducted with community members on park design and thermal comfort.

This work resulted in implementable design recommendations that include increasing vegetation, using water features and sprinkler pads, using artificial shade, and reflective, emissive building materials. Additionally, the Report recommended the creation of specific goals and supporting policies to aid implementation at the municipal level. Many of the recommended risk reduction strategies are either completed or under way. These strategies are now being incorporated into the Parks Master Plan. Many complementary policies exist in Windsor's Climate Change Adaptation Plan, including increased capital for shade structures for example.

This work built on early webinars delivered by the Clean Air Council relating to urban heat islands, and was made possible through inter-departmental collaboration at the City, and through collaboration between local and federal governments. Combining this information helped to produce design ideas and recommendations that are not only useful for Windsor, but all Canadian cities interested in improving thermal comfort in public spaces.

COLLABORATION ON HOME ENERGY EFFICIENCY RETROFITS IN ONTARIO

Local Improvement Charge (LIC) financing is enabled by the Ontario Ministry of Municipal Affairs and Housing and has been traditionally used in Ontario municipalities to finance community improvements such as sewers and sidewalks. In October 2012, the Ontario government amended the regulation governing LIC to allow the mechanism to be applied on a voluntary basis to private properties such as private single family or multi-residential homes or commercial or industrial properties.

While the LIC could be used to fund a variety of upgrades, there was particular interest in using the charge to address energy and water efficiency opportunities to improve the quality of existing building stock, to reduce pressures on local energy infrastructure, to reduce greenhouse gas and air pollutant emissions, to support energy cost savings for local residents and to generate local employment.

Many Ontario municipalities expressed interest in pilot testing the amended LIC mechanism to help understand its practical implications, benefits, and challenges. To facilitate this, the Collaboration on Home Energy Efficiency Retrofits in Ontario (CHEERIO) was created, representing 22 Ontario municipalities. This group was initiated by the Toronto Atmospheric Fund with funding from Natural Resources Canada, the Ontario Power Authority, the Ontario Ministry of Energy, Enbridge, the Region of Durham, and the cities of Guelph, London, Hamilton and Toronto. Ongoing facilitation for the collaboration was provided by the Clean Air Partnership.

The purpose of CHEERIO is to facilitate cost-sharing and co-operation in creating an LIC pilot-program template and other tools that can be used or adapted by any Ontario municipality. Clean Air Partnership, through an RFP process, facilitated the creation of a Primer and FAQ series for decision makers, a legal opinion on what the new regulation means for municipalities, a qualitative research study into LIC programs, and finally, an LIC Pilot Program Design for Residential Buildings in Ontario. These resources were used by municipalities studying the use of LICs in their communities. CHEERIO is an example of where scarce resources were used as efficiently as possible to achieve our collective environmental desired outcomes.

The purpose of CHEERIO is to facilitate cost-sharing and co-operation in creating an LIC pilot-program template and other tools that can be used or adapted by any Ontario municipality.



HEALTHY COMMUNITY DESIGN: POLICY STATEMENTS FOR OFFICIAL PLANS

Nearly three quarters of all planners surveyed indicated that planning policies from the resource had been incorporated into municipal planning decisions or documents. 85% of planners were either satisfied or very satisfied with the resource.

The Building Healthy Communities (BHC) Initiative was established in 2006 by Simcoe Muskoka District Health Unit staff to address public health issues related to the built environment. The goal of the BHC initiative is to provide strong public health leadership and expert health advice to key stakeholders in order to influence the design of new and existing communities. This will support sustainable communities and the achievement and maintenance of optimal health.

In 2009, the BHC conducted a needs assessment with municipal planners in Simcoe Muskoka which resulted in the creation of a policy resource for municipalities to support them in their work to incorporate healthy community design policies into official plans and other planning documents. The resource, Healthy Community Design: Policy Statements for Official Plans contains sample healthy community design policy statements and implementation activities that can be incorporated into policy documents, aiding in the creation of healthy communities while also meeting the Provincial planning policies.

The document has five sections which are based on key health issues impacted by the built environment: injury and safety, physical activity and sun safety, environment, food access, and social and cohesion well-being. Each section contains an overall health-related goal and rationale, a number of related objectives, suggested planning policies to help achieve the objectives and suggested strategies for implementation.

Each municipality in Simcoe Muskoka can consider these policy and implementation suggestions for inclusion in its Official Plan and other municipal strategies. Municipalities are encouraged to use the concepts within this document and to freely adapt, amend or revise the wording to suit their particular needs and circumstances.

To determine how useful the resource is, an online survey was administered. Nearly three quarters of all planners surveyed indicated that planning policies from the resource had been incorporated into municipal planning decisions or documents. 85% of planners were either satisfied or very satisfied with the resource.

In 2013 it was determined that the policy statement resource needed to be reviewed and updated to reflect new and updated research related to health and the built environment. The resource was updated to include more current and relevant policy statements, rationale, as well as references to the revised Provincial Policy Statement (2014).

HARMONIZED HEAT ALERT SYSTEM FOR ONTARIO

Extreme temperatures and high humidity poses a significant health risk to Canadians, especially vulnerable populations such as the elderly and those disadvantaged. An analysis of extreme heat events in Vancouver (2009) and in Montreal (2010) illustrated the link between heat and excess mortality and that many of these deaths were largely preventable, given appropriate notification and interventions.

In Ontario, there has been no consistent national approach for issuing heat advisories and/or the responses required to reduce heat related mortality and morbidity. A decentralized system has evolved where public health authorities have chosen different approaches to triggering their heat alerts and response plans. This has resulted in a diverse environment of thresholds for calling alerts, communication protocols and response mechanisms that led to an ineffective use of limited resources and public confusion.

In Ontario, the summer of 2012 witnessed several extended extreme heat events and daily maximum temperature records broken across many communities. This has in turn, led to a call from many public health units to better coordinate heat alert activations and response measures. Greater coordination was required amongst federal, provincial and municipal players to resolve the inconsistencies in Ontario. A long-term vision for consistent, health-relevant triggers, messaging and response was desired.

Responding to this call, Environment Canada and Health Canada have funded Clean Air Partnership to facilitate the creation of a harmonized heat alert system for Ontario. This has been achieved through the creation of a Project Team consisting of three Working Groups: Communications, Governance and Research. The Project Team mission was to develop an efficient, coordinated, evidence-based system comprised of standardized criteria for calling heat alerts and language easily understood by the public as well as the flexibility to address local vulnerabilities and needs. The new system uses standardized temperature and humidity criteria for calling alerts, and standardized language for issuing alerts. In 2015, the new system was piloted with ten health units. In 2016, the harmonized system will be used by all thirty-six health units across Ontario.

Image Credit: Maridav / shutterstock.com



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